

Title (en)

Electrical devices having improved transfer characteristics

Title (de)

Elektrische Vorrichtungen mit verbesserten Übertragungseigenschaften

Title (fr)

Dispositifs électriques dotés de caractéristiques de transfert améliorées

Publication

EP 2040299 A1 20090325 (EN)

Application

EP 07116253 A 20070912

Priority

EP 07116253 A 20070912

Abstract (en)

The invention concerns about electrical devices having improved transfer characteristics and a corresponding method of tailoring the transfer characteristics of such electrical devices. According to one aspect of the invention, there is provided an electrical device including at least two transistor segments or at least two transistors connected in parallel or in series characterized in that the at least two segments of the transistor or the at least two of the transistors have a different single transfer characteristic due to at least one of different topology and different material properties.

IPC 8 full level

H01L 29/423 (2006.01); **H01L 27/06** (2006.01); **H01L 29/778** (2006.01)

CPC (source: EP US)

H01L 29/42316 (2013.01 - EP US); **H01L 29/42376** (2013.01 - EP US); **H01L 29/778** (2013.01 - EP US)

Citation (search report)

- [X] US 2003201494 A1 20031030 - MAEDA SHIGENOBU [JP], et al
- [X] US 5519232 A 19960521 - PARK KYOUNG-WAN [KR], et al
- [X] WO 9850959 A1 19981112 - SIEMENS AG [DE], et al
- [X] US 2005127365 A1 20050616 - KOYAMA JUN [JP]
- [X] US 2002020873 A1 20020221 - KLODZINSKI STANLEY J [US]
- [X] WO 2005041301 A1 20050506 - NEC CORP [JP], et al
- [X] EP 0145053 A2 19850619 - PHILIPS NV [NL]
- [X] US 6078067 A 20000620 - OIKAWA HIROKAZU [JP]
- [A] BOLLAERT S ET AL: "Design Optimization of AlInAs-GaInAs HEMTs for High-Frequency Applications", IEEE TRANSACTIONS ON ELECTRON DEVICES, IEEE SERVICE CENTER, PISCATAWAY, NJ, US, vol. 51, no. 4, April 2004 (2004-04-01), pages 521 - 528, XP011109426, ISSN: 0018-9383
- [A] ISHII M ET AL: "V-SHAPED GATE HIGH ELECTRON MOBILITY TRANSISTOR (VHEMT)", JAPANESE JOURNAL OF APPLIED PHYSICS, JAPAN SOCIETY OF APPLIED PHYSICS, TOKYO, JP, vol. 32, no. 1A/B, PART 2, 15 January 1993 (1993-01-15), pages L36 - L38, XP000418091, ISSN: 0021-4922

Citation (examination)

- JP H07240528 A 19950912 - TOSHIBA CORP
- JP 2000183363 A 20000630 - NEC CORP
- EP 0735593 A1 19961002 - MURATA MANUFACTURING CO [JP]
- WO 2007007486 A1 20070118 - SANKEN ELECTRIC CO LTD [JP], et al

Cited by

US10615273B2; WO2018236682A1; US10978583B2; US12034072B2

Designated contracting state (EPC)

AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HU IE IS IT LI LT LU LV MC MT NL PL PT RO SE SI SK TR

Designated extension state (EPC)

AL BA HR MK RS

DOCDB simple family (publication)

EP 2040299 A1 20090325; JP 2010539691 A 20101216; US 2010244043 A1 20100930; WO 2009033903 A1 20090319

DOCDB simple family (application)

EP 07116253 A 20070912; EP 2008060487 W 20080808; JP 2010524436 A 20080808; US 67701108 A 20080808